



Assignment 3 – Group Project

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Our Contributions

Niklas Zimmer

During the project, I contributed to various aspects of development. I started by setting up the initial skeleton for the app. After that, I created different screens without implementing the backend logic. These screens included the Question screen, the Final Podium, and the Voting screen. Toward the end, I delved into Firebase and developed the logic for updating scores and synchronizing the selected categories and questions.

Niklas Eckert

I programmed a large part of the multiplayer functionality by implementing both the general synchronization of all relevant game data into the app via Firebase, as well as designing and implementing the entire lobby system that allows you to create new games, join existing games, and initiate the start of the quiz.

Marianne KERCKHOVE

I contributed to the concept development, wireframing, UI/UX design of the project and made the logo. My main responsibility included managing the API integration for the questions and establishing connections between the different categories and difficulty levels. I also implemented various sound effects and added background music to improve the overall experience of the app, as well as fixed a few bugs.

Coralie BONNAND

I contributed to the project's concept development, wireframing, and UI/UX design. My responsibilities included designing and implementing the widget for the wheel, ensuring it evolved dynamically with the player's progress. I developed the Question Result Screen and worked on the responsive design for various screens, such as the Category Vote Screen and the Question Screen. Additionally, I managed the colour scheme throughout the game.

Challenges

Design

The design process presented some challenges. We had to make sure the colors were different enough from each other but still easy to see. It was also important to show the players' points clearly so their progress was easy to understand. Making the app work well on all devices was also tricky and needed extra attention.

Architecture

Creating the architecture was particularly challenging for us. We struggled to find a way to separate the logic from the presentation. Eventually, we decided to use Bloc. However, even with this solution, we had difficulties using events to trigger actions in the game while also keeping the file structure clean. This led to a complete overhaul of the project.

Firebase

Another challenge we encountered was Firebase. Synchronizing the game across all players turned out to be a significant issue, and we faced problems we couldn't have imagined. For example, creating the voting system was difficult because we struggled to remove votes from categories and ensure accurate updates from Firebase. Additionally, there were unforeseen issues, such as synchronizing the category selection after voting. For instance, if there was an equal number of votes across categories, we would choose the next category for the question randomly. However, we didn't consider synchronizing the category at the start, which caused errors later on.

API

The last problem, we encountered was, that the API, we load the data from turned out to be unreliable and sometimes just sends a 429-error code, when there are too many requests or the server was under too high pressure. We encountered this problem very late.